

HEEJU TERRY PARK, Ph.D.

Professor of Apparel Design

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Heeju Park, a U.S. Fulbright Scholar, is a tenured Professor of Apparel Design at the Department of Human Centered Design. Dr. Park has participated in multiple funded multidisciplinary research projects aiming to develop user-centric wearable technology, and to improve the mobility and thermal comfort of personal protective clothing system including ballistic body armor, chemical and biological protective clothing, and firefighters' bunker gear over the years. He has focused on **wearable technology**, biomechanical and physiological evaluation of **personal protective clothing system** and **sports apparel** by exploring the advantages of the latest human performance simulation technologies such as motion capture and thermal manikin systems. His professional career as a **sports apparel & footwear manager at PUMA Korea**, endowed him with broad knowledge of ergonomic design features and technologies to improve mobility, comfort & athletic performance.

He has published **46 peer-reviewed journal papers** in various research journals including Applied Ergonomics (Impact factor: 3.66), Ergonomics (Impact factor: 2.76), Advanced Materials Technologies (Impact factor: 7.848), Energy and Buildings (Impact factor: 4.49), Fashion and Textiles (Impact factor: 2.54), Clothing and Textile Research Journal (Impact factor: 1.9), Textile Research Journal (Impact factor: 1.82), and AATCC Journal of Research (Impact factor: 1.12). He also published **9 refereed full papers** (6-10 pages) at major international conferences. He **wrote a textbook** entitled **Designing for Activewear** (currently under review, publisher: Fairchild Books Inc.) as a single author.

Dr. Park secured about **\$1.96 Million Research Funding (direct award to Park)** from 25 proposals (**total funding awarded** to selected projects: **\$8.5 Million**) selected by various agencies and industry partners including the Department of Energy, USDA (US Department of Agriculture), US Air Force, NASA, Environmental Protection Agency, and Combating Terrorism Technical Support Office. He is an inventor of **6 US patents of wearable sensors and shoes** which were developed in his active collaboration of his graduate students and other Cornell faculty members (2 patents issued, 2 pending and 2 filed). His research and creative design scholarship won awards at national and international level competitions and conferences as shown below.

2023 Fulbright U.S. Scholar Award,
2021 Best Brief Award at the International Symposium of Wearable Computers,
2020 ITAA (International Textile and Apparel Association) Mid-Career Excellence Award,
2018 Paper of Distinction Award at ITAA,
2016 Oklahoma State University College of Human Science Rising Star Award,
2015 ITAA Rising Star Award,
2014 Honorable Mention in the P3 Design Award (Environmental Protection Agency),
2012 Oklahoma State University Graduate Research Excellence Award,
2012 Paper of Distinction Award at ITAA,
2010 Phoenix Award for Oklahoma State University – Outstanding Doctoral Student,
2010 ATEXINC Excellent Marketable Design Award at the ITAA Design Competition,
2009 Second Place Award at American Quilter's Society Fashion Design Competition

He has taught Fashion CAD, 3D Virtual Fashion Design, Functional Clothing, Activewear Design and Product Development, Smart Clothing Design and Programming, and Ethical Design at Cornell

University. Through his teaching and mentoring, many undergraduate students and graduate students experienced success in various national and international conferences and design competitions. Dr. Park, as a major advisor (special committee chair) has mentored 6 Ph.D. students and 12 M.A./M.S. students at Cornell University. Dr. Park's effective pedagogy and mentoring has been recognized by prestigious awards as shown below.

*2022 SUNY (State University of New York) Chancellor's Award for Excellence in Teaching,
2022 Cornell Class of 1972 Academic Innovation Award,
2021 Second Place Award at the ITAA Nancy Rutherford Teaching Innovation Award*

EDUCATION

- 2011 **Ph. D in Human Sciences – Emphasis on Functional Apparel Design**
Oklahoma State University, Stillwater, Oklahoma
Advisor: Dr. Donna Branson
Dissertation: Impact of Body Armor and Load Carriage on Lower Body Movement
- 2002 **Master of Science in Clothing and Textiles**
Yonsei University, Seoul, Korea
Advisor: Dr. Joohyeon Lee
Thesis: An Explorative Research for Possibility of Digital-wear based on Motion-detective Input Technology as Apparel Product and a Suggestion of the Design Prototypes
- 1997 **Bachelor of Science in Clothing and Textiles**
Yonsei University, Seoul, Korea

PROFESSIONAL EXPERIENCE

- 2024-Present **Professor**
Department of Human Centered Design, Cornell University
- 2017-2023 **Associate Professor**
Department of Human Centered Design, Cornell University
- 2011-2016 **Assistant Professor**
Department of Fiber Science and Apparel Design, Cornell University
- 2007-2011 **Research Associate**
IPART (Institute for Protective Apparel Research & Technology), Oklahoma State University
- 2007-2011: Research Associate
- Grant Research Project: Development and Evaluation of Body Armor and Smart Clothing (Funded by Office of Naval Research)
- 2008 Fall-2010 Spring: Research Associate
- Grant Research: Development and Evaluation of Smart Clothing for

Firefighters (Funded by OCAST: Oklahoma Center for the Advancement of Science and Technology)

INDUSTRY EXPERIENCE

- 2006-2007 **Footwear Product Line Manager**
E.LAND Co., Ltd. / Division of PUMA KOREA, Seoul, Korea.
- 2002-2005 **TeamSports Product Line Manager**
E.LAND Co., Ltd. / Division of PUMA KOREA, Seoul, Korea.
Responsibility: Market Research, Trend Forecasting, Global Sourcing, Domestic Production Control and Profitability Analysis
- 2002 **Assistant Technical Designer**
G.F. Textile Inc. Seoul, Korea.

PEER-REVIEWED JOURNAL PUBLICATIONS

46 Journal publications, 2 Manuscripts in Revision

* indicates **Corresponding author**.

† indicates **Cornell student authors**.

46. Kong, D., Lin, A., Melissas, A, Stull, J., & **Park, H.** (2024). Design Considerations for Protective Boots for First Responders to Hazardous Materials Incidents. *Applied Ergonomics* (Impact factor: 3.661). <https://doi.org/10.1016/j.apergo.2024.104341>
45. †Lin, A, Kao, C, & ***Park, H.** (2024). A Modular Framework for Smart Garment Design. *Clothing and Textile Research Journal* (Impact factor: 1.9).
44. †Maher, M., †Du Puis, J., †Goodge, K., **Park, H.**, & Frey, M. & *Baytar, F. (2024). Cloth Face Mask Fit and Functionality for Children 4-6 Years Old – Part III: Fit and Sizing, *Fashion and Textiles* (Impact factor: 2.54).
43. †Jo, J. & ***Park, H.** (2023). Fit of Fire Boots: Exploring Internal Morphology Using Computed Tomography Scan, *International Journal of Occupational Safety and Ergonomics* (Impact factor: 2.665). <https://doi.org/10.1080/10803548.2023.2247765>
42. †Kong, D., Seock, Y-K, Marschner, S., & ***Park, H.** (2023). Leveraging 4D Golf Apparel Wear Simulation in Online Shopping: A Promising Approach to Minimizing the Carbon Footprint. *Sustainability* 15(14), 11444 (Impact factor: 3.251). <https://doi.org/10.3390/su151411444>
41. †Jo, J. & ***Park, H.** (2023). Machine Embroidery Enclosure for Stretchable Fiber Optic Respiration Sensor. *Advanced Sensor Research*.
40. †Goodge, K., †Maher, M., †Du Puis, J., **Park, H.**, Baytar, F., & *Frey, M. (2022). Cloth Face Mask Fit and Functionality for Children 4-6 Years Old – Part II: Materials, *Fashion and Textiles*, 9(1), 1-18 (Impact factor: 2.765).
39. †Jo, J., †Xu, A., †Mishra, A. K., †Bai, H., †Derkovorkian, A., Rabinovitch, J., **Park, H.**, & *Shepherd, R. (2022), Measurement of Parachute Canopy Textile Deformation Using Mechanically Invisible Stretchable Lightguides, *Advanced Materials Technologies*, 7(12), (Impact factor: 8.856). DOI: <https://doi.org/10.1002/admt.202200437>.
38. †Jo, J. Sokolowski, S., McQuerry, M., Griffin, L., & ***Park, H.** (2022). Firefighters' Feet: Difference by Sex and Weight Bearing, *Applied Ergonomics* (Impact factor: 3.661). DOI: <https://doi.org/10.1016/j.apergo.2022.103753>.

37. †Du Puis, J., †Goodge, K., †Forstenhausler, L., †Maher, M., Frey, M., Baytar, F., & *Park, H. (2022). Cloth Face Mask Fit and Functionality for Children 4-6 Years Old – Part I: Design Exploration, *Fashion and Textiles (Impact factor: 2.765)*. 9(1), 1-20. DOI: <https://doi.org/10.1186/s40691-022-00287-8>.
36. *Sokolowski, S., Park, H., Griffin, L, McQuerry, M, & Tuttle, J. (2022). Visual, Volumetric and Anthropometric Measurement Comparisons Between Boot Interior and 3D Foot Scans to Improve Firefighter Safety. *Interdisciplinary Practice in Industrial Design*. 48, 91-99.
35. †Lou, L., Shou, D., Park, H., Zhao, D., Wu, Y., S., †Hui, X., †Yang, R., Kan, E., and *Fan, J. (2020). Thermoelectric Air Conditioning Undergarment for Personal Thermal Management and HVAC Energy Saving. *Energy and Buildings (Impact factor: 4.495)*.
34. †Nemeth, M., *Park, H., & Mendle, J. (2020). Collegiate Female Athletes' Body Image and Clothing Behaviors. *Fashion and Textiles (Impact factor: 2.54)*.
33. *Park, H., Kakar, R., †Pei J., Tome, J., & Stull, J. (2019). Impact of Size of Fire Boots and Self-Contained Breathing Apparatus on Firefighters' Mobility. *Clothing and Textile Research Journal (Impact factor: 1.9)*. 37(2), 103-118. DOI: <https://doi.org/10.1177/0887302X18807753>.
32. *Park, H., †Pei, J., †Shi, M., †Xu, Q., & Fan, J. (2019), Designing Wearable Computing Device for Improved Comfort and User Acceptance, *Ergonomics. (Impact factor: 2.76)*, 62(11), 1474-1484.
31. †Pei, J., Park, H., & *Ashdown, S. (2019). Female Breast Shape Classification based on Analysis of CAESAR 3D Body Scan Data, *Textile Research Journal (Impact factor: 1.4)*. DOI: <https://doi.org/10.1177/0040517517753633>.
30. Park, H. & *Koo, S. (2018). Emerging trends in 3D technology adopted in apparel design research and product development. *Journal of Korean Society of Clothing and Textiles*. 42(1), 195-209.
29. Tian M., *Park, H., †Koo, H., †Xu, Q., & Li, J. (2018). Effects of Load Carriage and Work Boots on Lower Limb Kinematics of Industrial Workers, *International Journal of Occupational Safety and Ergonomics*. 24(4), 582-591 (Impact factor: 2.665). DOI: <http://dx.doi.org/10.1080/10803548.2017.1334336>
28. †Pei, J., Park, H., *Ashdown, S., Arzu Vuruskan (2017). A Sizing Improvement Methodology Based on Adjustment of Interior Accomodation Rates across Categories within a Size Chart, *International Journal of Clothing Science and Technology*. 29(5), 716-731 (Impact factor: 0.75).
27. †Beaudette, E., & *Park, H. (2017), Impact of Seam Types on Thermal Comfort of Athletic Bodywear, *Textile Research Journal. (Impact factor: 1.599)*. 87(9), 1052-1059.
26. *Lewis, T. L., Park, H., Netravali, A. N., & †Trejo, H. X. (2017). Closing the loop: a scalable zero-waste model for apparel reuse and recycling. *International Journal of Fashion Design, Technology and Education*, 10(3), 353-362.
25. Tian M., *Park, H., †Koo, H., †Xu, Q., & Li, J. (2017). Impacts of Work Boots and Load Carriage on the Gait of Oil Rig Workers, *International Journal of Occupational Safety and Ergonomics*. 23(1), 118-126 (Impact factor: 2.665).
24. *Park, H., Hwang, S., Lee, J-Y., Fan, J., & Jeong, Y. (2016). Impact of Electrical Heating on Effective Thermal Insulation of a Multi-layered Winter Clothing System for Optimal Heating Efficiency, *International Journal of Clothing Science and Technology*. 28(2), 254-264 (Impact factor: 1.1).
23. Lee, E., & *Park, H. (2016), 3D Virtual Fit Simulation Technology: Strengths and Areas of Improvement for Increased Industry Adoption, *International Journal of Fashion Design, Technology and Education*. 1-12. ISSN 1754-3266.
22. †Donelan, C., & *Park, H. (2016). Evaluation of Cooling Garments for Improved Design and Thermal Comfort Thermal Manikin Tests, *AATCC Research Journal*. 3(5), 1-11. DOI: [10.14504/ajr.3.5.1](https://doi.org/10.14504/ajr.3.5.1).

21. †Alicia Potuck, A., †Meyers, S., †Levitt, A., †Beaudette, E., †Xiao, H., Chu, C., & *Park, H. (2016), Development of Thermochromic Pigment-based Sportswear for Detection of Physical Exhaustion, *Fashion Practice*. 8(2), 279-295. (Impact factor: 1.08).
20. *Park, H., Kim, S., †Morris, K., †Moukperian, M., Moon, Y., & Stull, J. (2015). Effect of Firefighters' Personal Protective Equipment on Foot Function and Gait, *Applied Ergonomics*. (Impact factor: 1.332). 48, 42-48.
19. *Park, H., †Trejo, H., †Miles, M., †Bauer, A., Kim, S., & Stull, J. (2015). Impact of Firefighters' Turnout Gear on Lower Body Range of Motion, *International Journal of Clothing Science and Technology*. (Impact factor: 0.333). 27(3). 315-334.
18. *Lee, J-Y, Park, J., Park, H., Coca, A., Kim, J-H., Taylor, N.A.S., Son, S-Y., & Tochihiro, Y. (2015), What Do Firefighters Desire from the Next Generation of Personal Protective Equipment? Outcomes from an International Survey, *Industrial Health*, 53(5), 434-444 (Impact factor: 1.045).
17. Kim, S., & *Park, H. (2015). Impact of Firefighters' Protective Clothing and Equipment on Upper Body Range of Motion. *Fashion and Textile Research Journal*. 17 (4). 635-645.
16. Lee, H. Y. & *Park, H. (2015). Comparison of Thermal-moisture Properties in Combination of 3D Spacer and Polyurethane Foam for Mold Brassier Cups. *Korean Journal of Human Ecology*. 24(2). 285-295.
15. *Park, H., Branson, D., Kim, S., Warren, A., Jacobson, B., Petrova, A., Peksoz, S., & Kamenidis, P. (2014), Effect of Armor and Carrying Load on Body Balance and Leg Muscle Function, *Gait and Postures* (Impact factor: 1.969). 39(1), 430-435.
14. *Park, H., Park, J., Lin S-H., & Boorady, L. (2014). Assessment of Firefighters' Needs for Personal Protective Equipment, *Fashion & Textiles*, (Impact factor: 2.54), 1(1), 1-13.
13. *Park, H., Kim, S., †Wu Y., & †Allen, N. (2014), Beyond Protection: Technology and Design Moving Toward Human Factors of Fire Gear, *AATCC Review*, (Impact factor: 0.254), 14(5), 40-44.
12. *Park, H., & Hahn, K. (2014), Perception of Firefighters' Turnout Ensemble and Level of Satisfaction by Body Movement, *International Journal of Fashion Design, Technology and Education*. 7(2), 85-95.
11. *Park, H., Branson, D., Petrova, A., Peksoz, S., Jacobson, B., Warren, A., Goad, C., & Kamenidis, P. (2013), Impact of Ballistic Body Armor and Load Carriage on Walking Patterns and Perceived Comfort, *Ergonomics* (Impact factor: 1.674). 56(7), 1167-1179.
10. Han, H., Park, H., & *Jeon, E. (2013), User Acceptance of a Light-Emitting Diode Vest for Police, *Fashion and Textiles Research Journal*, 15(5), 834-840.
9. *Park, H., Branson, D., Petrova, A., Peksoz, S., Warren, A., Jacobson, B., Goad, C., & Kamenidis, P. (2013), Effects of Body Armor and Load Carriage on Lower Limb Joint Movement, *Journal of Human Performance in Extreme Environments*. 10(2). DOI: <http://dx.doi.org/10.7771/2327-2937.1049>.
8. *Park, H., An, S. K., Peksoz, S., Cao, H., & Branson, D. (2012). Core Body Temperature Prediction through Monitoring of Microclimate under Body Armor Using Thermal Manikin, *AATCC Review*. 12(2), 69-72.
7. *Park, H. (2012), Toward Finding an Optimal Balance between Function and Comfort in the Most Intimate Human Environment, *Journal of Ergonomics*, 2(4) 1:e114. DOI:10.4172/2165-7556.1000e114.
6. *Park, H., & Cho, H. (2012). Social Online Communities: Information Source for Apparel Shopping, *Journal of Consumer Marketing*. 29(6), 400-411.
5. *Park, H., Nolli, G., Branson, D., Peksoz, S., Petrova, A., & Goad, C. (2011). Impact of Wearing Body Armor on Lower Body Movement, *Clothing and Textile Research Journal*, (Impact factor: 0.33), 29(3), 232- 247.

4. *Park, H., Choi, K., & Branson, D. (2009). Effect of Heat Reflective Textile for Thermal Protective Smart Apparel System against Solar Radiation, *2009 Human Computer Interaction International Conference*, San Diego, CA. (5-page full proceeding paper)
3. Park, H., *Lee, J. H., & Lee, S. G. (2002). An Explorative Research for Possibility of Digital-wear based on Motion-detective Input Technology as Apparel Product and a Suggestion of the Design Prototypes (I). *Korean Journal of the Science of Emotion & Sensibility*, 5(1), 33-48.
2. Park, H., *Lee, J. H., & Lee, S. G. (2002). An Explorative Research for Possibility of Digital-wear based on Motion-detective Input Technology as Apparel Product and a Suggestion of the Design Prototypes (II). *Korean Journal of the Science of Emotion & Sensibility*, 5(2), 35-50.
1. Lee, Y, Chung, H., Park, H., Lee, J., & *Cho, G. (2002). Effect of Design Elements of Block Stripe Pattern on Sensibility, *Korean Journal of the Science of Emotion & Sensibility*, 5(3), 21-28.

5 Manuscripts Currently Under Review/In Revision

5. Jo, J., Kong D., & *Park, H. (In revision). Stretchable Fiber Optic-Embedded Gait Monitoring Insole. *Clothing and Textile Research Journal* (Impact factor: 1.9).
4. Jo, J. & *Park, H. (In revision). Battery-Free Head Orientation Measurement Using Passive RFID Tags for Lateral Glance Detection for Children with Autism Spectrum Disorder. *Wearable Technologies*.
3. †Zong, W., †Elangovan, T., Bogan, M., McQuerry, M., & *Park, H. (In revision). Survival Jacket for Homeless. *Clothing and Textile Research Journal* (Impact factor: 1.9).
2. †Melissas, A., & *Park, H. (In revision). Hodino ḥsô:nih? Honored: a Collaborative Lacrosse Uniform Design. *Fashion Practice* (Impact Factor: 1.08)
1. Gyenge, A., & *Park, H. (2024, Under review). Assessing the Impact of Sustainable Certifications on Material and Product Choices in Fashion. *Clothing and Textile Research Journal* (Impact factor: 1.9).

9 REFEREED FULL PAPERS AT INTERNATIONAL CONFERENCES (6-10 PAGES)

All venues blind-peer reviewed.

* indicates **Corresponding author**. † indicates **Cornell student authors**.

9. †Jo, J., & *Park, H. (2021). RFInsole: Batteryless Gait-Monitoring Smart Insole Based on Passive RFID Tags. *2021 International Symposium of Wearable Computing, Virtual Conference*.
8. †Jo, J., †Kong, D., & *Park, H. (2021). BLInG: Beads-Laden Interactive Garment. *2021 International Symposium of Wearable Computing, Virtual Conference*.
7. †Jia, M., Tome, J. M., †Shi, M., *Park, H., Fan, J., & Kakar, R. S. (2018). Dynamic Knee Orthosis System for Females with Anterior Cruciate Ligament Injuries. *Medicine & Science in Sports & Exercise*. 50(5S), 42.
6. †Gordon, PH., †Chen, R., Park, H., & *Kan, EC. (2017) Embroidered Antenna Characterization for Passive UHF RFID Tags, IEEE RFID 2016, Orlando, FL.
5. †Beaudette, E., Hinestroza, J., †Sanchez-Botero, L., Park, H., & *Ashdown, S. (2014). Innovative explorations in apparel design to create engineered outfits with lighting technologies. In *Proceedings of the 2014 ACM International Symposium on Wearable Computers: Adjunct Program* (pp. 15-19). ACM. ISBN: 978-1-4503-3048-0. DOI:10.1145/2641248.2641279.
4. Choi, K., *Park, H., Chung, E. & Peksoz, S. (2011). Scientometric Analysis of Research in Smart Clothing: State of the Art and Future Direction, *Lecture Notes in Computer Science*, 6776, 500-508.
3. Peksoz, S., Cao, H., Park, H., An, S. K., & *Branson, D. (2010). Core Temperature Prediction Modeling using a Sweating Manikin, *The 8th International Meeting Manikins and Modeling*, Victoria, BC, Canada. (5-page full proceeding paper)

2. Branson, D., *Kamenidis, P., Peksoz, S., **Park, H.**, An, S. K., & Starr, C. (2010). Thermal Manikin Evaluation of Prototype Arm and Shoulder Armor, *The 8th International Meeting for Manikins and Modeling*, Victoria, BC, Canada. (5-page full proceeding paper)
1. Peksoz, S., **Park, H.**, An, S. K., & *Cao, H. (2009). Smart Clothing for Firefighter Protection, *Intelligent Textiles and Mass Customisation International Conference*, Casablanca, Morocco. (ISBN: 978-9954-8878-1-4).

INVITED BOOK WRITING

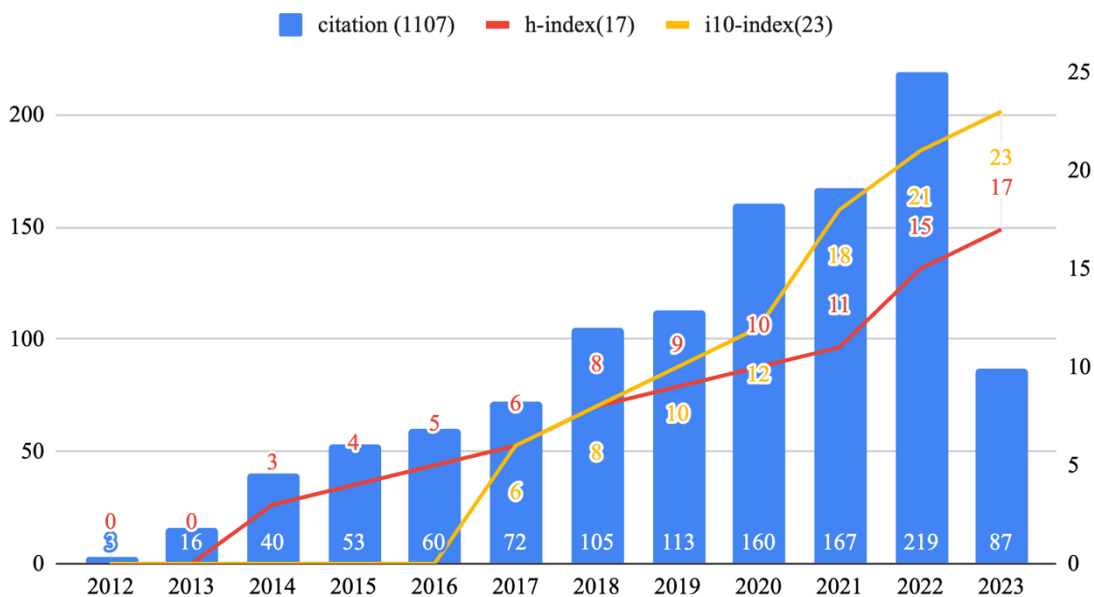
Designing for Activewear (In press, 2024), ***Park, H.** Target publication: March 2025, Publisher: Bloomsbury, FairChild Books.

BOOK CHAPTER

Future Textiles, Bloomsbury, †Jo, J., Conroy, M., & ***Park, H.** (Submitted in 2022, Under review)

CITATIONS (Google Scholar) Total citations: 1107, h-index: 17, i10- index: 23

Citations, h-index and i10-index



* Please note as of June 2022 my legal name has changed from **Huiju Park** to **Heeju Terry Park**.

62 REFERRED CONFERENCE PRESENTATIONS/ABSTRACTS

All venues blind-peer reviewed.

* indicates **Corresponding author**. † indicates **Cornell student authors**.

62. †Kong, D., & ***Park, H.** (2024). Ideological and cultural aspects of South Korea through the Lens of Fashion: Golf Apparel. *2024 International Conference of Fashion Business*, Seoul, S. Korea.

61. †*Kong, D., & **Park, H.** (2024). Custom Image Segmentation Using YOLO-v8 to Extract Reference Points of Pants Front Panel. *2024 International Conference of Clothing and Textiles*, Jeju, S. Korea.
60. ***Park, H.** (2024). Application of Nudge Theory. *2024 International Conference of Clothing and Textiles*, Jeju, S. Korea.
59. †Pandey, A., Shepherd, L., & ***Park, H.** (2023). Designing a SHIFT from Synthetics: Sustainable Hybrid Insulating Flotation Technical Jacket. *2023 Annual Conference of ITAA (International Textile and Apparel Association)*, Baltimore, MD.
58. †Kong, Y., & ***Park, H.** (2023). 4D Golf Apparel Wear Simulation for Improved Online Shopping Experience. *2023 Annual Conference of ITAA (International Textile and Apparel Association)*, Baltimore, MD.
57. †Melissas, A., & ***Park, H.** (2023). Hodinghsó:nih? honored: A collaborative Lacrosse Uniform Design. *2023 Annual Conference of ITAA (International Textile and Apparel Association)*, Baltimore, MD.
56. †Elangovan, T., Baytar, F., & ***Park, H.** (2023). Redesign of Women's Ice Hockey Impact Protection Gear for Improved Comfort, Fit and Protection. *2023 Annual Conference of ITAA (International Textile and Apparel Association)*, Baltimore, MD.
55. †Lin, A., & ***Park, H.** (2023). A Modular Framework for Smart Garment Design. *2023 Annual Conference of ITAA (International Textile and Apparel Association)*, Baltimore, MD.
54. †Norris, H., & ***Park, H.** (2022). Reflective Material as Thermal Control in Cycling Jerseys. *2022 Annual Conference of ITAA (International Textile and Apparel Association)*, Denver, CO.
53. †Maher, M., †Goodge, K., †Du Puis, J. L., Fey, M., **Park, H.**, & Baytar, F. (2022). Cloth Face Mask Fit and Function for Children: Sizing and Fit Analysis. *2022 Annual Conference of ITAA (International Textile and Apparel Association)*, Denver, CO.
52. †Elangovan, T., & ***Park, H.** (2022). Metaverse and Fashion: Skills needed for Creators to Achieve a Competitive presence. *2022 Annual Conference of ITAA (International Textile and Apparel Association)*, Denver, CO.
51. †Zong, W., †Elangovan, T., Bogan, M., McQuerry, M., & **Park, H.** (2022). Recycled Tent Converted to a Survival Jacket for Homeless People. *2022 Annual Conference of ITAA (International Textile and Apparel Association)*, Denver, CO.
50. †Jo, J., & **Park, H.** (2022). Machine Embroidery Enclosure for Stretchable Fiber Optic Respiration Sensor. *2022 Annual Conference of ITAA (International Textile and Apparel Association)*, Denver, CO.
49. †Galada, A., †Melissas, A., †Collins, A., & **Park, H.** (2022). Selected Kirigami Pattern Cutout for Optimal Flexibility and Wicking in Triathlon Performance Wear T-Shirt. *2022 Annual Conference of ITAA (International Textile and Apparel Association)*, Denver, CO.
48. †*Goodge, K., Lin, A., Xiao, R., & **Park, H.** (2022). Evaluating the Extended Comfort of Multilayer Face Coverings. *2022 International Conference on Clothing and Textiles*, Seoul, Korea.
47. †Jo, J., & ***Park, H.** (2021). RFInsole: Batteryless Gait-Monitoring Smart Insole Based on Passive RFID Tags. *2021 International Symposium of Wearable Computing*, Virtual Conference.
46. †Jo, J., †Kong, D., & ***Park, H.** (2021). BLInG: Beads-Laden Interactive Garment. *2021 International Symposium of Wearable Computing*, Virtual Conference.
45. †Jo, J., & ***Park, H.** (2021). Fiber Optic-embedded Gait-Tracking Insole for Detection of Toe-Walking in Children with Autism Spectrum Disorder. *2021 Annual Conference of ITAA (International Textile and Apparel Association)*, Baltimore, MD. (Oral presentation)
44. †Jo, J., †Zhang, Z., Griffin, L., Sokolowski, S., McQuerry, M., & ***Park, H.** (2021). Differences in Foot Measurement between Female and Male Firefighters. *2021 Annual Conference of ITAA (International Textile and Apparel Association)*, Baltimore, MD. (Oral presentation)

43. †Forstenhausler, †L., Hahn, K., & *Park, H. (2021). Can We Work This Out?: An Examination of the US Activewear Industry through the Lens of the COVID-19 Pandemic. *2021 Annual Conference of ITAA (International Textile and Apparel Association)*, Baltimore, MD. (Oral presentation)
42. †Du Puis, J. L. & *Park, H. (2021). Towards the Development of an Apparel Design Framework for Circus Costume. *2021 Annual Conference of ITAA (International Textile and Apparel Association)*, Baltimore, MD. (Oral presentation)
41. †Du Puis, J. L., †Goodge, K., †Forstenhausler, L., †Maher, M., Baytar, F., Frey M., & *Park, H. (2021). Cloth Face Mask Fit and Functionality for Children 4-6 years Old. *2021 Annual Conference of ITAA (International Textile and Apparel Association)*, Baltimore, MD. (Oral presentation)
40. †Jo, J., & *Park, H. (2020). Fit of Fire Boots: CT (Computerized Tomography) Scan and 3D Simulation. *2020 Annual Conference of ITAA (International Textile and Apparel Association)*, Denver, CO. (Accepted, Oral presentation)
39. †Jo, J., & *Park, H. (2020). Head Orientation Monitoring with Wearable RFID for Detection of Lateral Glance of Children with Autism Spectrum Disorder. *2020 Annual Conference of ITAA (International Textile and Apparel Association)*, Denver, CO. (Accepted, Oral presentation)
38. †Du Puis, J. L., †Bayne, R., & *Park, H. (2020). Developing a Wearable Technology Compression Shirt Prototype: Interdisciplinary Collaboration between Apparel Design and Mechanical Engineering. *2020 Annual Conference of ITAA (International Textile and Apparel Association)*, Denver, CO. (Accepted, Oral presentation)
37. †Li, M., *Park, H., & Ruina, A. (2019). Design and Evaluation of New Personal Floating Device for Rowers. *2019 Annual Conference of ITAA (International Textile and Apparel Association)*, Las Vegas, NV.
36. †Guria, S., & *Park, H. (2019). Design and Evaluation of Coverall for Pesticide Applicators using an ergonomic framework. *2019 Annual Conference of ITAA (International Textile and Apparel Association)*, Las Vegas, NV.
35. *Park, H., Kakar, R. S., †Pei, J., †Lee, H., Tome, J., and Stull, J. (2018). Different Impacts of Boot Height and Air Tanks on the Mobility of Tall and Short Firefighters, *2018 Annual Conference of ITAA (International Textile and Apparel Association)*, Cleveland, OH.
34. †Shi, M., †Jia, M., and *Park, H. (2018). Using Artificial Intelligence to Analyze Fashion Images, *2018 Annual Conference of ITAA (International Textile and Apparel Association)*, Cleveland, OH.
33. *Sokolowski, S., Griffin, L., Carufel, R., Kim, N., Park, H., †Shi, M., Morris, K., Aflatoony, L., McKinney, E., Leathers, K., Wu, Y., Park, J., Conroy, B., Carvalho, M. (2018). A User-Centered Approach for New PPE Development: iWomen Case Study, *2018 Annual Conference of ITAA (International Textile and Apparel Association)*, Cleveland, OH.
32. †Guria, S. & *Park, H. (2018). Assessing the Needs of Greenhouse and Farm Workers Engaged in Pesticide Application for Improved Personal Protective Equipment (PPE) Design. *AATCC 2018 International Conference*, Greenville, SC.
31. †Jia, M., †Tome, J. M., †Shi, M., Park, H., & *Kakar, R. S. (2018). Dynamic Knee Orthosis System for Females with Anterior Cruciate Ligament Injuries. *American College of Sports Medicine 2018 Annual Meeting*, Minneapolis, MN.
30. †Jia, M., †Shi, M., Kakar, R. S., *Park, H., & Fan, J. (2018). Design of Smart Leggings and Motion Control Device for Effective Recovery from Knee Ligament Injuries. *AATCC 2018 International Conference*, Greenville, SC.
29. †Guria, S. & *Park, H. (2017). Assessment of greenhouse pesticide applicators' needs for personal protective gear. *2017 Annual Conference of ITAA (International Textile and Apparel Association)*, Petersburg, Florida.
28. †Doty, K., Li, †M., Black, †E., Chandler, †A., Guria, S., *Park, H., & Green, D. (2017). Preliminary Investigation of Bikram Yoga Apparel for Improved Mobility and Comfort. *2017 Annual Conference of ITAA (International Textile and Apparel Association)*, Petersburg, Florida.
27. †Pei, J., Park, H., & *Ashdown, S. (2016) Female Breast Shape Classification Based on Analysis of

- CAESAR data, *2016 Fiber Society Meeting*, Cornell University, Ithaca, NY.
26. †Lee, H., †Beaudette, E., & *Park, H. (2016). Development of New Hockey Gear for Enhanced Neck Laceration Protection, *2016 Fiber Society Meeting*, Cornell University, Ithaca, NY.
 25. *Park, H., Hwang, S-K., Lee, J-Y., Fan, J., and Jeong, Y. (2016). Effectiveness of Electrical Heating for Improved Thermal Insulation of a Multi-layered Winter Clothing System, *2016 Annual Conference of ITAA (International Textile and Apparel Association)*, Vancouver, British Columbia.
 24. †Tian, M., *Park, H., and Li, J. (2016). Impact of Wearing Work Boots and Carrying Load on Lower-Limb Kinematic and Safety, *2016 Annual Conference of ITAA (International Textile and Apparel Association)*, Vancouver, British Columbia.
 23. *Park, H., †Pei, J., †Shi, M., †Xu, Q., & Fan, J. (2016), Acceptable Physical Attributes of Wearable Computing Device based on Human Factors, *2016 International Conference on Applied Human Factors and Ergonomics*, Orlando, FL.
 22. *Kakar, RS., Park, H., †Lee, H., & Tome, J. (2016), Effect of Boot Height on Walking and Duckwalking Mechanics in Firefighters. *2016 40th Annual Meeting of the American Society of Biomechanics*, Raleigh, NC.
 21. †Beaudette, E., & *Park, H. (2015), Thermal Comfort Evaluation of Seam Types in Athletic Bodywear, *2015 Annual Conference of ITAA (International Textile and Apparel Association)*, Santa Fe, NM.
 20. *Park, H., †Kim, S., †Morris, K., †Moukperian, †M., Moon, Y., & Stull, J. (2014), Impact of Firefighters' Personal Protective Equipment on Gait Instability and Injury Risk, *2014 Annual Conference of ITAA (International Textile and Apparel Association)*, Charlotte, NC.
 19. *Park, H., & Hahn, K. (2014), Perception of Firefighters' Turnout Ensemble and Level of Satisfaction by Body Movement, *2014 Annual Conference of ITAA (International Textile and Apparel Association)*, Charlotte, NC.
 18. †Lee, E., & *Park, H. (2014), Filling the Gap between Education and the Field in Technical Design: I Wish I Had Learned This Before, *2014 Annual Conference of ITAA (International Textile and Apparel Association)*, Charlotte, NC.
 17. †*Beaudette, E., Sanchez-Botero, L., Ashdown, S., Park, H., & Hinestroza, J. (2014). Innovative Explorations in Apparel Design to Create Engineered Outfits with Lighting Technologies, *2014 International Symposium of Wearable Computer*, San Francisco, CA.
 16. *Lee, J., Park, H., Hwang, S., Jang, Y., Kim, S., Fan, J., & Jeong, Y. (2013). Influences of Air Temperature and Thermal Insulation of Clothing Ensemble on Thermal Insulation added by Active Heating Unit, *The Annual Conference of Korean Society of Living Environmental System*, Seoul, Korea.
 15. *Park, H., Branson, D., Kamenidis, P., Warren, A., Jacobson, B., Peksoz, S., & Petrova, A. (2012). Exploration of Simultaneous Mobility Assessment for Protective Clothing, *5th European Conference on Protective Clothing and NOKOBETEF 10*, Valencia, Spain.
 14. *Park, H., Branson, D., Petrova, A., Peksoz, S., Jacobson, B., Warren, A., Goad, C., & Kamenidis, P. (2012). Effects of Body Armor and Load Carriage on Lower Limb Joint Movement, *2012 Annual Conference of ITAA (International Textile and Apparel Association)*, Honolulu, Hawaii.
 13. Choi, K., *Park, H., Chung, E. & Peksoz, S. (2011). Scientometric Analysis of Research in Smart Clothing: State of the Art and Future Direction, *2011 Human Computer Interaction International Conference*, Orlando, FL.
 12. *Park, H., Nolli, G., Branson, D., Peksoz, S., & Petrova, A. (2010). Mobility Evaluation of Lower Body Movement using Motion Capture System while Wearing Ballistic Body Armor, *2010 Annual Conference of ITAA (International Textile and Apparel Association)*, Montreal, Quebec, Canada.
 11. *Park, H., & Cho, H. (2010). Factors Influencing Commitment to Social Networks: Implications for the Apparel Business, *2010 Annual Conference of ITAA (International Textile and Apparel Association)*, Montreal, Quebec, Canada.

10. *Peksoz, S., Cao, H., **Park, H.**, An, S. K., & Branson, D. (2010), Core Temperature Prediction Modelling using a Sweating Manikin, *The 8th International Meeting for Manikins and Modeling*, Victoria, BC, Canada.
9. Branson, D., *Kamenidis, P., Peksoz, S., **Park, H.**, An, S. K., & Starr, C. (2010). Thermal Manikin Evaluation of Prototype Arm and Shoulder Armor, *The 8th International Meeting for Manikins and Modeling*, Victoria, BC, Canada.
8. ***Park, H.**, An, S. K., Peksoz, S., Cao, H., & Branson, D., (2010). Core Body Temperature Prediction through Monitoring of Microclimate under Body Armor Using Thermal Manikin, *2010 Annual Conference of American Association of Textile Chemists and Colorists*, Atlanta, GA.
7. ***Park, H.**, Choi, K., & Branson, D. (2009), Physical Properties of Military Textiles Affecting Thermal Response to Solar Radiation, *2009 Annual Conference of ITAA (International Textile and Apparel Association)*, Bellevue, WA.
6. An, S. K., **Park, H.**, Cao, H., Peksoz, S., & *Branson, D. (2009), Development of Estimation Model to Predict Firefighter's Core Temperature from Microclimate Data, *2009 Annual Conference of ITAA (International Textile and Apparel Association)*, Bellevue, WA.
5. Peksoz, S., Starr, C., Choi, K., Kamenidis, P., **Park, H.**, & *Branson, D. (2009), *Evaluation of Prototype Personal Cooling Interfaced with a Liquid Cooled Garment under Hazmat Suits*, 2009 Annual Conference of ITAA (International Textile and Apparel Association), Bellevue, WA.
4. Peksoz, S., **Park, H.**, An, S. K., & *Cao, H. (2009), Smart Clothing for Firefighter Protection, *Intelligent Textiles and Mass Customization International Conference*, Casablanca, Morocco.
3. ***Park, H.**, Choi, K., & Branson, D. (2009), Effect of Heat Reflective Textile for Thermal Protective Smart Apparel System against Solar Radiation, *2009 Human Computer Interaction International Conference*, San Diego, CA.
2. ***Park, H.** (2009), Thermal Effects of Heat Reflective Fabric for Military Application, *2009 Annual Conference of Oklahoma Association of Family and Consumer Science*, Stillwater, OK.
1. Cao, H., An, S. K., **Park, H.**, Xu, B., Li, X., & *Branson, D. (2008), The Effect of Fabric Covering on Sensor's Humidity Measurement, *2008 Annual Conference of ITAA (International Textile and Apparel Association)*, Schaumburg, IL.

2 KEYNOTE SPEAKER TALKS

Park, H. (2022), Title of Keynote Speaker Talk: Fashion Future and Technology, 2022 International Conference of Fashion Business, Seoul, Korea. (October 28, 2022)

Park, H. (2021), Title of Keynote Speaker Talk: Smart Wearable Interface for Human Health and Safety, 48th Textile Research Symposium, The Textile Machinery Society of Japan. (December 8, 2021)

17 INVITED TALKS OUTSIDE CORNELL

17. **Park, H.** (2024), Title of speech: Data-driven design approaches to human health and safety at Jeju National University, South Korea (September 28, 2024)

16. **Park, H.** (2024), Title of speech: AI-driven Design for On-body Interfaces at the Korean Society for Emotion and Sensibility (June 25, 2024)

15. **Park, H.** (2024), Title of speech: Fashion and Textiles, Engine for a Better Future, School of Fashion and Textiles at Hong Kong Polytechnical University (May 28, 2024)

14. **Park, H.** (2022), Title of speech: Data Driven Design Approach, Special Lecture at the 2022 International Conference of Clothing and Textiles, Seoul, Korea. (May 28, 2022)

13. **Park, H.** (2022), Title of speech: Design and production for Humanity. Ewha Women's University, Korea. (October 31, 2022)

12. **Park, H.** (2022), Title of speech: Informatics in Fashion Design. Seoul Women's University, Korea. (October 26, 2022)
11. **Park, H.** (2022), Title of speech: Prospect of Fashion Design for the Elderly at Changwon University, Korea (January 13, 2022)
10. **Park, H.** (2021), Title of speech: Wearable Interface at Changwon University, Korea. (March 28, 2021)
9. **Park, H.** (2020), Innovation in Design of Protective Clothing, Oklahoma State University. (November 15, 2020)
8. **Park, H.** (2019), Applications of Emerging Technologies in Design of Protective Clothing, Illinois State University. (April 8, 2019)
7. **Park, H.** (2018), Engineering the Most Intimate Human Interface, University of Georgia, Athens, GA. (October 3, 2018)
6. **Park, H.** (2015), Ergonomic Approach toward Improving Firefighters' Mobility and Safety, International Symposium of Firefighter Heat Strain, Seoul National University, Seoul, Korea. (April 8, 2015)
5. **Park, H.** (2015), Advances in Performance Apparel, Cornell Institute for Fashion and Fiber Innovation Symposium, Ithaca, NY. (May 18, 2015)
4. **Park, H.** (2013), Technology-driven Design Approach in Sportswear and Protective Clothing, Global Future Conference, Manchester Metropolitan University, Manchester, UK. (February 12, 2013)
3. **Park, H.** (2013), Present and Future of Protective Clothing Research, 2013 Special Seminar for Research Center for Textiles and Fashion, Yonsei University, Seoul, Korea. (November 26, 2013)
2. **Park, H.** (2013), Wearable Technologies for Smart Health Care System, 2013 Special Seminar for Department of Bio-mechatronics, Sungkyunkwan University, Seoul, Korea. (November 27, 2013)
1. **Park, H.** (2012), Physiological and Biomechanical Assessment of Protective Clothing Systems, Annual Conference of Korean Society of Clothing and Textiles, Seoul, Korea. (May 16, 2012)

GRANTS (73 submitted, 30 funded, 1 under review, 42 not funded)

I have secured **\$1.96 Million Research Funding (Direct/net award to me)** from 27 selected proposals (**total amount of funding awarded: \$8.5 Million**) listed below since my appointment at Cornell University in 2011.

Out of those 30 projects, I have functioned **as the PI in 16 projects**, and **as a Co-PI in 10 projects**, and **a sub-contractor in 4 projects**. Funding agencies to support my projects below include the Department of Energy, NASA, USDA, US Air Force, Environmental Protection Agency, the United States Agency for International Development, and a few fashion/sportswear companies.

[30 Proposals Funded]

Smart Firegear Development Research with STEM Education Outreach Component for 4H groups

PIs: **Park, H** (PI) & Fran Kozen

Source of Funds: National Institute of Food and Agriculture, USDA

Amount Funded: \$156,966

Period: October 2022 – September 2025

Community Engaged Course Grant

PIs: **Park, H** (PI)

Source of Funds: College of Human Ecology, Cornell University

Amount Funded: \$6,000

Period: October 2023 – December 2023

Community Research Grant

PIs: **Park, H** (PI)

Source of Funds: College of Human Ecology, Cornell University

Amount Funded: \$4,000

Period: October 2023 – May 2024

Cockpit Monitoring of Pilot Muscle Tension, Heart Rate and Respiration

PIs: Organic Robotics Corp. Inc. & **Park, H**.

Source of Funds: US Air Force

Amount Funded: \$749,914 (Award to Park: \$225,006)

Period: April 2022 – March 2023

Cornell Engagement Fund

PIs: **Park, H**

Source of Funds: College of Human Ecology, Cornell University

Amount Funded: \$1,100

Period: March 2023 – December 2023

Gait-Monitoring Fiber Optic Shoe Insole

PI: **Park, H**. (PI) & Jo, J.

Source of Funds: Cornell Technology for Licensing IGNITE Research Acceleration

Amount Funded: \$25,000

Period: September 2021 – August 2022

Footwear Enhanced for All-Threats

PIs: Jeffrey Stull, International Personnel Protection, & **Park, H** (Sub-contractor)

Source of Funds: Department of Defense Irregular Warfare Technical Support Directorate

Amount Requested: \$520,000 (Award to Park: \$77,127)

Period: January 2022 – December 2022

Wearable Fiber Optic Performance Monitoring System

PIs: Organic Robotics Corp. Inc. & **Park, H**.

Source of Funds: US Air Force

Amount Funded: \$49,996 (Award to Park: \$15,000)

Period: April 2021 – July 2021

Development of Facemasks for Children for Improved Protection and Non-contaminated Donning/Doffing

PIs: **Park, H**. (PI) & Baytar, F.

Source of Funds: Cornell Atkinson Center

Amount Funded: \$10,000

Period: July 2020 – December 2020

Stretchable Optical Lightguides for Sensing Deformation During Parachute Deployment

PIs: Shepherd, R. & **Park, H**.

Source of Funds: NASA

Amount Funded: \$10,000 (Award to Park: \$10,000)

The entire funding was transferred to Park with the PI's agreement.

Period: November 2020 – September 2021

Evaluation of Civilian Face Masks via Wear Trials

PIs: Kozen, F., Phoenix, K., & Park, H
Source of Funds: Cornell Atkinson Center
Amount Funded: \$6,488
Period: July 2020 – December 2020

Indoor Occupant Counting and Co2 Monitoring Based on RF Backscattering

PIs: Kan, E., Park, H., Hysell, D., Zadeh, R., Mukhopadhyay, J.
Source of Funds: Department of Energy
Amount Requested: \$1,500,000 (Award to Park: \$278,491)
Period: April 2018 – March 2021

Innovative Non-Encapsulating NFPA 1994 Class 1 Protective Ensemble

PIs: Jeffrey Stull, International Personnel Protection, Tom Ames, Blauer Manufacturing
& Park, H. (Sub-contractor)
Source of Funds: Department of Defense Combating Terrorism Technical Support Office
Amount Requested: \$748,546 (Award to Park: \$116,245)
Period: July 2018 – November 2020

Anthropometric and Biomechanical Study for Improved Size and Fit of Protective Gear for Farmers and Firefighters

PIs: Park, H.
Source of Funds: National Institute of Food and Agriculture, USDA
Amount Requested: \$87,090
Period: October 2017 – September 2020

New College Resources for Data Science and Programming Course Development

PI: Park, H.
Source of Funds: College of Human Ecology, Cornell University
Amount Requested: \$145,250
Period: October 2019 – September 2022

Optic Lace for Parachute

PIs: Shepherd, R. & Park, H.
Source of Funds: NASA
Amount Funded: \$52,000 (Award to Park: \$52,000)
The entire funding was transferred to Park with the PI's agreement.
Period: December 2019 – September 2020

Thermoregulatory Clothing System for Building Energy Saving

PIs: Fan, J., Park, H., Kan, E., Yang, R., & Lewis, T.
Source of Funds: Department of Energy
Amount Funded: \$2,996,800 (Award to Park: \$450,405)
Period: March 2015 – August 2018

Impact of Golf Shoes on Turf Damage

PI: Park, H.
Source of Funds: Footjoy Inc.
Amount Requested: \$5,000
Period: July 2017 – September 2018

New Pesticide Applicators Protective Gear for Improved Thermal Comfort and Mobility

PIs: **Park, H.**

Source of Funds: National Institute of Food and Agriculture, USDA

Amount Requested: \$89,314

Period: October 2016 – September 2019

Biomechanic and Anthropometric Assessment on Impact of Firefighters Personal Protective Equipment on Mobility and Body Balance

PIs: **Park, H.**

Source of Funds: National Institute of Food and Agriculture, USDA

Amount Funded: \$95,500

Period: October 2012 – September 2017

New Clothing System for Improved Heat Stress Relief, Full Body, Liquid Integrity, and Ease of Donning

PIs: Jeffrey Stull, International Personnel Protection, Judith Mulcay, Kappler, Inc.,
& **Park, H.** (Sub-contractor)

Source of Funds: United States Agency for International Development

Amount Requested: \$650,000 (Award to Park: \$55,289)

Period: June 2015 – March 2016

P3 Design Award: Proposed Process for Management of Textile Waste from Redesigned Secondhand Clothing Production in Haiti (Phase I)

PIs: Lewis, T., **Park, H.**, & Netravali, A

Source of Funds: Environmental Protection Agency

Amount Funded: \$11,922

Period: October 2012 – September 2013

Low Cost, Lightweight, Multi-Functional First Responder Biological Protective Ensemble

PIs: Jeffrey Stull, International Personnel Protection, Tom Ames, Blauer Manufacturing & **Park, H.** (Sub-contractor)

Source of Funds: Department of Defense Combating Terrorism Technical Support Office

Amount Requested: \$649,492 (Award to Park: \$84,210)

Period: January 2016 – June 2017

Development of Cut Resistant Protective Hockey Shirt

PI: **Park, H.**

Source of Funds: Empire State Development's Division of Science, Technology and Innovation (NYSTAR) through CCMR (Center for Cornell Material Research) Jumpstart Program

Amount Funded: \$15,000

Period: February 2015 – June 2015

Investigation of Upper Body Classification for Shaping Wear

PIs: **Park, H.** (PI) & Ashdown S.

Source of Funds: Hanes Group through Cornell Institute for Fashion and Fiber Innovation

Amount Funded: \$ 95,000

Period: September 2015 – May 2016

Investigation of Active Sportswear Sizing System

PIs: **Park, H.** (PI) & Ashdown S.

Source of Funds: Winds Group through Cornell Institute for Fashion and Fiber Innovation
Amount Funded: \$1,800
Period: November 2014 – February 2015

Active Youth; Activewear; Active Learning

PIs: Coffman, C & **Park, H.**
Source of Funds: New York State 4H Foundation
Amount Funded: \$7,808
Period: January 2013 – December 2013

Engage Youth in Stem Learning and Resource Development Through Innovation in Activewear

PIs: Coffman, C & **Park, H.**
Source of Funds: College of Human Ecology and Cornell Cooperative Extension Intern Program
Amount Funded: \$4,000
Period: June 2013 – August 2013

Migrating for New Habitat

PIs: **Park, H.**, Morris, K., Flint, R., Jeong, Y., and Ashdown, S.
Source of Funds: Cornell Council for Art Grant
Amount Funded: \$2,500
Period: October 2011 – September 2012

43 Proposals Submitted, Not Funded

In-Situ Strain Mapping of F-111 Fabrics for Measuring Parachute Dynamics

PIs: Organic Robotics Corp. & **Park, H.**
Source of Funds: NASA
Fund requested: \$645,000 (Park's portion: \$284,102)
Period: February, 2021 – August 2021

IGNITE Acceleration Fund

PIs: **Park, H.**
Source of Funds: Cornell Center for Technology Licensing
Fund requested: \$50,000
Period: January 2024 – December 2024

Interactive Intr'acte: Digital Textile Art

PIs: **Park, H.**(PI), Du Puis, J. L. & Jo, J.
Source of Funds: Cornell Council for the Arts
Fund requested: \$2,500
Period: August 2021 – December 2021

The Compleat Mask: An Effective Reusable Multilayer Cloth Face Covering

PIs: Du Puis, J. L., Goodge, K., Frey, M., & **Park, H.**
Source of Funds: Department of Health and Human Services - Biomedical Advanced Research and Development Authority (BARDA)
Fund requested: \$10,000
Period: August 2021 – December 2021

Wearable Countermeasure with Embedded Electrical Stimulus and Photonics for Reduced Paraspinal Muscle Atrophy in Space Flight

PIs: **Park, H.** (PI) Baytar, F., Kakar, Shepherd, R., & Parry, S.
Source of Funds: NASA
Fund requested: White Paper Submission
Period: September 2021 – August 2022

Remote Monitoring and Tele-Rehab Using Optic Fibers Based Wearable Clothing for Cancer Survivors and Older Adults

PIs: Kakar, R., **Park, H.**, & Shepherd, R.
Source of Funds: National Institute of Health
Fund requested: \$1,500,000 (Park's portion: \$465,145)
Period: December 2021 – November 2024

Ubiquitous Monitoring of Warfighters' Mind-Body State using Wearable Light Lace Photonic Sensors

PIs: Organic Robotics Corp. & **Park, H.**
Source of Funds: Department of Defense
Fund requested: \$166,497
Period: February 2021 – August 2021

Wearable Fiber Optic Performance Monitor

PIs: Organic Robotics Corp. & **Park, H.**
Source of Funds: Department of Defense STTR (Phase I)
Fund requested: \$49,995
Period: February 2021 – May 2021

Development of Biological Protective Clothing for Infection-Free Doffing and Rapid Body-Cooling

PI: **Park, H.**
Source of Funds: Fast Grants Org. <https://fastgrants.org/?subscribed=true>
Fund requested: \$511,603
Period: July 2020 – December 2020

Transient Etiological Agent Mitigation Through Enhanced Fabric Layered Over Neutralizing Biomes (TEAM TEFLON Biomes).

Cornell team was a subcontract from the University of Minnesota,
PI: Michael Smanski (12 co-PIS cannot disclose per DARPA rules)
\$ 34.2 Million (total budget).
Budget of Cornell Team: \$4,068,638
Huiju Park is one of the Co-PIs in the Cornell Team.
Project period: July 2020 – June 2025

Chemical and Biological Shield

Cornell team was a subcontract of Protect
The Force, LLC, PI: Francisco Martinez (4 co-PIS cannot disclose per DARPA rules),
\$ 25.3 Million (total budget).
Budget of Cornell Team: \$7,266,303
Huiju Park is one of the Co-PIs in the Cornell Team.
Project period: July 2020 – June 2025

Developing better-fitting face masks based on face anthropometry and generative design to improve protection

PIs: Baytar, F., Kalantari, S., Phoenix, K., & Park, H.

Source of Funds: Cornell Atkinson Center

Fund requested: \$10,000

Period: July 2020 – December 2020

Developing a Capstone Course for Human-Centered Design, Digital Capability, Functional Materials and Responsible Supply

PIs: Frey, M., Lewis, T & Park, H.

Source of Funds: The Proctor & Gamble Company (P&G)

Fund requested: \$17,500

Period: July 2021 – June 2022

User-Centered Systems of Ergonomic Performance & Compatibility for Firefighter Turnout Gear

PIs: Griffin, L., Park, H., & Sokolowski, S.

Source of Funds: Assistance to Firefighter Grant Program, Federal Emergency Management Agency

Fund requested: \$1,499,577 (Park's portion: \$450,000)

Period: July 2018 – June 2021

Egocentric Posture Acquisition and Motion Tracking by RFID Backscattering

PIs: Kan, E., & Park, H.

Source of Funds: SONY Inc.

Fund requested: \$150,000

Period: January 2018 – December 2018

Intelligent Bedrooms by Noninvasive Sleep and Activity Monitoring

PIs: Kan, E., Park, H., Krieger, A., & Zadeh, R.

Source of Funds: National Science Foundation

Amount Requested: \$1,399,444

Period: August 2017 – July 2020

Small-Now: Scaleable Manufacturing of Flexible Nanophotonics for Wearable Applications

PIs: Erickson, D., Shepherd, R. & Park, H.

Source of Funds: National Science Foundation

Amount Requested: \$1,500,000

Period: July 2016 – June 2020

Battery-Free Smart Garments for Smart Homes and Buildings

PIs: Kan, E., Fan J., & Park, H.

Source of Funds: Atkins Center for a Sustainable Future

Amount Requested: \$140,985

Period: July 2016 – June 2018

Quantification of Foot Alignment for Diagnosis of Dynamic Foot Function

PIs: Park, H

Source of Funds: National Science Foundation CAREER

Amount Requested: \$498,889

Period: July 2017 – June 2022

Minimizing Circadian Sleep Disruption and Reducing Pain in Hospitalized Older Adults: PRIME: an Integrative Evaluation and Monitoring System

PIs: Rana, Z., Kan, E., & **Park, H.**

Source of Funds: Cornell Discovery and Innovation Research Seed Program

Amount Requested: \$250,000

Period: May 2016 – April 2018

Hydraulically Actuated Soft Exosuit for Assisted Undersea Salvage and Rescue

PIs: Robert Shepherd (PI) & **Park, H.** (Co-PI)

Source of Funds: Office of Naval Research

Amount Requested: \$510,000 (Park's portion.: \$71,011)

Period: June 2016 – May 2019

Wearable Activity Surveillance System by Harmonic Radar for First Responders

PIs: **Park, H.** (PI) & Kan, E.

Source of Funds: Intel Inc. (*Invitation only proposal*)

Amount Requested: \$320,000

Period: January 2016 – December 2017

Smart Firegear with Wireless Sensor and Id

PIs: **Park, H.** (PI) & Kan, E.

Source of Funds: Intel Inc. (*Invitation only proposal*)

Amount Requested: \$340,000

Period: January 2016 – December 2017

Standardized Test Method for Cooling System Assessment Based on Key Performance Indices

PIs: Jeffrey Stull, **Park, H.** & Fan, J.

Source of Funds: Department of Homeland Security

Amount Requested: \$840,000 (Park's portion: \$650,000)

Period: January 2016 – December 2017

Context-Intelligent Wearable Activity Surveillance System by RF Backscattering

PIs: Kan, E., **Park, H.**, & Jeffrey Stull,

Source of Funds: Department of Homeland Security

Amount Requested: \$480,000

Period: January 2016 – December 2017

Human Kinematic Tracking by RF Backscattering with Kinesiology Learning

PIs: Kan, E & **Park, H.**

Source of Funds: National Science Foundation

Fund requested: \$976,767

Period: May 2015 – April 2019

Indoor Tagless RF Locating for Patient Monitoring

PIs: Kan, E & **Park, H.**

Source of Funds: National Science Foundation

Fund requested: \$473,460

Period: May 2015 – April 2017

Smart Thermoregulatory Clothing for Energy Saving for Performance

PIs: Fan, J., **Park, H.** & Kan, E

Source of Funds: Atkinson Center for a Sustainable Future Academic Venture Fund

Fund requested: \$120,000

Period: July 2014 – June 2016

Development of Contamination and Particle Resistant Firefighting Protective Ensemble

PIs: Pat Morrison, International Association of Firefighters, Jeffrey Stull, International Personnel Protection & **Park, H.** (contractor)

Source of Funds: Department of Homeland Security

Amount Requested: \$939,886 (Park's portion at Cornell: \$142,667)

Period: May 2015 – October 2016

Quantification of Foot Alignment for Diagnosis of Dynamic Foot Function

PIs: **Park, H**

Source of Funds: National Science Foundation CAREER

Amount Requested: \$500,000

Period: July 2015 – June 2020

P3 Design Award: Proposed Process for Management of Textile Waste from Redesigned Secondhand Clothing Production in Haiti (Phase II)

PIs: Lewis, T., **Park, H.**, & Netravali, A

Source of Funds: Environmental Protection Agency

Fund requested: \$57,984

Period: September 2014 – August 2016

Enhancing Safety of Care-Takers Involved in Education of Children with Developmental Disabilities and Autism

PIs: **Park, H.**, & Netravali, A

Source of Funds: Cornell Institute for Social Science

Fund requested: \$12,000

Period: January 2015 – December 2015

Functional, Fashionable and Comfortable Fibertronics

PIs: Kan, E., Fan, J., & **Park, H.**

Source of Funds: Cornell Center for Material Research Seed Fund

Fund requested: \$20,000

Period: May 2014 – April 2015

Quantification of Foot Alignment for Diagnosis of Dynamic Foot Function

PIs: **Park, H**

Source of Funds: National Science Foundation CAREER

Amount Requested: \$467,640

Period: July 2014 – June 2019

Biomechanic Assessment of Impact of Body Armor and Load Carriage on Warfighters' Mobility

PIs: **Park, H.** Ashdown, S., & Feathers, D.

Source of Funds: Natick Soldier Research, Development and Engineering Center

Amount Requested: \$919,985

Period: September 1, 2011 - August 30, 2012

Monitoring of Dismounted Warfighters' Military Task Performance and Physiological Reactions to Body Armor and Load Carriage

PIs: **Park, H.**

Source of Funds: DARPA (Defense Advanced Research Projects Agency) Young Faculty Award

Amount Requested: \$270,179

Period: September 1, 2012 - August 30, 2014

Development of a Prototype of a Wearable Fall-Detection and Alarm System for The Elderly

PIs: **Park, H.** (PI), Hosseinzadegan, H and Lal, A.

Source of Funds: Cornell Institute for Translational Research on Pain in Later Life

Amount Requested: \$20,000

Period: June 2013 – May 2014

CB Protective Sock/Liner System Based on Modification of Existing Field-Demonstrate Product

PIs: Cole Williams, Danalco, Jeffrey Stull, International Personnel Protection & **Park, H.** (contractor)

Source of Funds: Department of Defense Technical Support Working Group

Amount Requested: \$1,328,642 (Park's portion at Cornell: \$106,800)

Period: September 1, 2013 – March 31, 2015

Development of Close-Fitting Firefighters' Boots to Improve Mobility

PIs: **Park, H.** & Ashdown, S.

Source of Funds: Honeywell First Responders Inc.

Amount Requested: \$291,249

Period: September 1, 2013 - August 30, 2016

Design Suggestions for Firefighters' Air Bottle and Harness System for Improved Mobility and Comfort

PIs: **Park, H.**

Source of Funds: Honeywell First Responders Inc.

Amount Requested: \$194,750

Period: September 1, 2013 - August 30, 2015

3D Fit Analysis of Firefighters' Boots to Improve Mobility and Comfort

PIs: **Park, H.**

Source of Funds: Honeywell First Responders Inc.

Amount Requested: \$20,754

Period: June 2013 – September 2013

Innovative Sportswear Development based on Collaborative Research and Development

PIs: **Park, H.**

Source of Funds: MAS Holdings Inc.

Amount Requested: \$132,384

Period: September 1, 2011 - August 30, 2012

7 PATENTS (2 Issued, 3 pending, and 2 filed)

2023 (*Design Patent Application Filed: Pending*) "Body curve-conforming 3D printed Women's chest protection panel with removable waist protection add-on for shoulder pads" by Elangovan, T., Baytar, F., & **Park, H.**: Cornell Docket Number: 10940

2021 (*Provisional Application Filed: Pending*) "Machine Embroidery Enclosure for Stretchable Fiber

- Optic Sensor” by Jo, J & **Park, H.**; Cornell Docket Number: 10029
- 2021 (*PCT Application Filed: Pending*) ”Stretchable Fiber Optic Plantar Pressure Sensor” by Jo, J & **Park, H.**; Cornell Docket Number: 9862
- 2017 (*US patent Issued*) “Adjustable shoe and method for adjusting a shoe” by Shi, M., **Park, H.**, Stager, J., Tapen, T., Liu, T., and Beach, C. US Patent No. 10,687,585; Cornell Docket Number: 6932
- 2015 (*US Patent Issued*) “Tree-like Tube Networks in Garment” by Fan, J., Shou, D., and **Park, H.**; US Patent No. 10,980,292; Cornell Docket number: 7264
- 2014 (*US Non-Provisional Application: Filed*) “Flexible Wearable Devices Having Embedded Actuators Providing Motion Stimulations” by Lal, A., **Park, H.**, Hosseinzadegan, H., Pandey, M., Gaeta, M., Beaudette, E., and Maida, M.; US Patent App. 14/473,787 Cornell Docket number: 6370
- 2014 (*US Non-Provisional Application: Filed*) “Temperature-regulating Garment” invented by Fan, J., **Park, H.**, and Yuenshing Wu.; US Patent App. 15/127,073; Cornell Docket Number: 6602

AWARDS & HONORS

- 2024 **Community-Engaged Practice and Innovation Award**
David M. Einhorn Center for Community Engagement, Cornell University
- 2023 **Fulbright U.S. Scholar Award** [with funding to support 1 year of research/teaching]
Fulbright Council and U.S. Department of State
- 2022 **“ITAA Paper of Distinction” Award**
2022 Annual Conference of ITAA (International Textile and Apparel Association), Denver, CO.
Co-Authors: Maher, M., †Du Puis, J., †Goodge, K., **Park, H.**, & Frey, M. & *Baytar, F.
Title of Paper: Cloth Face Mask Fit and Functionality for Children 4-6 Years Old – Part III: Fit and Sizing (Design and Product Development Track)
- 2022 **Third Place Award of Protective Clothing Design Competition: Hero X and the National Institute for Occupational Safety & Health** (Fatma Baytar and Heeju Park)
National Institute for Occupational Safety & Health
- 2022 **Cornell’s Class of 1972 Award for Academic Innovation with \$10k funding**
Cornell Class of 1972
- 2022 **SUNY Chancellor Award for Excellence in Teaching**
SUNY (State University of New York)
- 2021 **Best Brief Award (Jeyeon Jo & Heeju Park)**
Title of Paper: Batteryless Gait-Monitoring Smart Insole Based on Passive RFID Tags
2021 International Symposium of Wearable Computing
- 2021 **Second Place at the 2021 ITAA Nancy Rutherford Teaching Innovation Award**
2021 Annual Conference of ITAA (International Textile and Apparel Association), Virtual Conference Due to Covid 19 Pandemic
- 2020 **ITAA Mid-Career Excellence Award**

- 2020 Annual Conference of ITAA (International Textile and Apparel Association), Virtual Conference Due to Covid 19 Pandemic
- 2018 **‘ITAA Paper of Distinction’ Award (First and Corresponding Author)**
2018 Annual Conference of *ITAA (International Textile and Apparel Association)*, Cleveland, OH.
Title of Paper: Different impacts of Boot Height and Air Bottles on the Mobility of Tall and Short Firefighters (Textile and Apparel Science Track)
- 2016 **Oklahoma State University Rising Star Award**
College of Human Science, Oklahoma State University, Stillwater, OK
- 2015 **ITAA Rising Star Award**
2015 Annual Conference of *ITAA (International Textile and Apparel Association)*, Santa Fe, New Mexico.
- 2015 **Nominated for Oklahoma State University Rising Star Alumni Award**
Oklahoma State University, Stillwater, OK
- 2015 **Listed in Who’s Who in America**
- 2014 **Nominated for KON/Alumni Advising Award**
College of Human Ecology, Cornell University
- 2014 **Honorable Mention: P3 Design Award**
U.S. Environmental Protection Agency
- 2012 **Oklahoma State University Graduate Research Excellence Award**
Oklahoma State University, Stillwater, OK
- 2011 **College of Human Science Outstanding Doctoral Student (\$ 500)**
College of Human Science, Oklahoma State University, Stillwater, OK.
- 2010 **‘ITAA Paper of Distinction’ Award (First and Corresponding Author)**
2010 Annual Conference of *ITAA (International Textile and Apparel Association)*, Montreal, Quebec, Canada.
 - Title of Paper: Mobility Evaluation of Lower Body Movement Using Motion Capture System while Wearing Ballistic Body Armor (Textile and Apparel Science Track)
- 2010 **ITAA Sarah Douglas Fellowship for Promising Doctoral Student (\$500)**
2010 Annual Conference of *ITAA (International Textile and Apparel Association)*, Montreal, Quebec, Canada
- 2010 **Phoenix Award for Oklahoma State University Outstanding Doctoral Student (\$ 700)**
Oklahoma State University, Stillwater, OK.
- 2010 **Marguerite Scruggs Research Enrichment Fellowship (\$ 1,000)**
Oklahoma State University, Stillwater, OK

- 2009 **ITAA ATEXINC Excellent Marketable Design Award (\$ 350)**
2009 Annual Conference and Fiber Art, Design Competition of *ITAA (International Textile and Apparel Association)*, Bellevue, WA.
- 2009 **Second Place (\$ 700)**
The 23rd Annual American Quilter's Society & Hobbs Bonded Fibers Fashion show and competition, Paducah, KY.
- 2009 **Marguerite Scruggs Research Enrichment Fellowship (\$ 2,000)**
Oklahoma State University, Stillwater, OK.
- 2009 **Nominated Candidate for Outstanding Doctoral Student Award of College of Human Environmental Science**
Oklahoma State University, Stillwater, OK.
- 2009 **Honorable Mention**
The National Little Black Dress Competition, Kansas State University, Manhattan, KS.
Member of Phi Kappa Phi Honor Society
Member of Golden Key International Honor Society
- 2008 **First Place in Paper Presentation, 19th Annual Research Symposium (\$ 100)**
Oklahoma State University, Stillwater, OK.
Title of Paper: Solar-powered Heating Jacket
(Human Environmental Science Track)

COURSES TAUGHT (2020 - 2023)

- FSAD 1140: Fashion CAD (Spring 2020)
- FSAD 2660: Activewear Design and Product Development (Spring 2020, 2021, 2022 and 2023)
- FSAD 3990: Smart Clothing: Design and Programming (Fall 2020, 2021, 2022 and 2023)
- FSAD 4010: Empirical Independent Study (Beckett Fine and Anna Paaske, Spring 2023)
- FSAD 4010: Empirical Independent Study (Hanna Norris, Fall 2020)
- FSAD 4030: Teaching Apprenticeship (Lauren Forstenhausler: Spring 2020)
- FSAD 4990: FSAD Honor Thesis (Lauren Forstenhausler, Fall 2020 and Spring 2021)
- FSAD/DEA6800: Ethical Design – Engine of Positive Changes (Spring 2023)
- FSAD 6900: Functional Aspects of Clothing and Design (Fall 2021)
- FSAD 6000: Independent Study (Daniel Banko, Fall 2022 and Spring 2023)

Video clips / photos of examples of student projects are available on the links below.

FSAD2660 (2021): <https://youtu.be/puQqULSku8A>

FSAD3990 (2020-2022): https://www.youtube.com/watch?v=Edez5M5_4F8

<https://youtu.be/XIF0I3NrYIM>

<https://youtu.be/EIBACOmRYd8>

<https://youtu.be/w52naaAJVck>

<https://youtu.be/H3vWw5EiHJg>

FSAD6900 (2019): <https://www.performancewear.human.cornell.edu/post/fsad-6900-team-project>

COURSES TAUGHT (2011~2019)

- FSAD 1140: Fashion CAD

- FSAD 2660: Activewear Design and Product Development
- FSAD 3550: Active Sportswear Design
- FSAD 4010: Empirical Independent Study
- FSAD 4030: Teaching Apprenticeship
- FSAD 4990: FSAD Honor Thesis (Lauren Forstenhausler, Class of 2021)
- FSAD 6900: Functional Aspects of Clothing and Design

STUDENTS' SUCCESS THROUGH TEACHING & MENTORING

- 2023 **Doyeon Kong (my PhD student)** received **First Place Award** at Student Best Paper Competition (Graduate student Masters' category) at the 2023 Annual Conference of International Textiles and Apparel Association
- 2022 **Jeyeon Jo (my PhD student)** was selected as the winner of FSAD Graduate Student Speech Competition. (\$500 travel fund awarded)
- 2021 **Jeyeon Jo (my PhD student)** received the **Best Brief Award** at the 2021 International Symposium of Wearable Computers.
Title of Paper: Batteryless Gait-Monitoring Smart Insole Based on Passive RFID Tags
- 2021 **Lauren Forstenhausler (my advisee, class of 2021)** was selected by the Dean of Cornell Human Ecology as a **Merrill Presidential Scholar**. I was **listed as the most influential professor** to impact her success during her study at Cornell.
- 2021 **Lauren Forstenhausler (my advisee, class of 2021)** received **Second Place at the 2021 Student Best Paper Competition** at Undergraduate Category at the **ITAA Conference**.
- 2020 **Lauren Forstenhausler (my advisee, class of 2021)** received the **2020 Blanche Payne Scholarship** at the ITAA Conference.
- 2020 **Jenny Leigh Du Puis (my PhD student)** received the 2020 ITAA Outstanding Graduate Student in the Study of Historic Textiles or Costume **Robert C. Hillestad Fellowship** at the ITAA Conference.
- 2020 **Jeyeon Jo (my PhD student)** received the **Roberta G. 1957 and the John B. 1956 De Vries Graduate Student Award**. The award is given to the outstanding graduate student who demonstrated excellent multidisciplinary research in collaboration with engineering school.
- 2020 **Lauren Forstenhausler (in FSAD2660 Activewear Design and Product Development):** Blitz, accepted for 2020 *ITAA (International Textile and Apparel Association) Design Competition* (Virtual Conference)
- 2020 **Lauren Forstenhausler & Audrey Perlman (in FSAD2660 Activewear Design and Product Development):** Pen Umbra, accepted for 2020 *ITAA (International Textile and Apparel Association) Design Competition* (Virtual Conference)

- 2019 **Quinn Guthrie (class of 2022) received CHE Undergraduate Summer Research Stipend (\$6,000)**, completed 3D Virtual Prototyping and Animation of Figure Skating Outfits. She had the solo exhibition from outcomes of this summer research project mentored by me. **Link to the project:** [Quinn Guthrie, creating figure skating sportswear using 3D. - YouTube](#)
- 2019 **Jenny Leigh Du Puis** (my PhD student) received the **ITAA (International Textile and Apparel Association) Outstanding Beginning Doctoral Student Marjorie Joseph Fellowship**.
- 2018 **Ryan Platt** (in **FSAD2660** Activewear Design and Product Development): Pristine accepted for 2019 *ITAA (International Textile and Apparel Association) Design Competition* (Las Vegas, NV)
- 2018 **Kaya Middleton** (in **FSAD2660** Product Development for Active Sportswear): Glacial Fracture accepted for the 2018 *ITAA (International Textile and Apparel Association) Design Competition* (Cleveland, OH)
- 2016 **Mananchaya Phisphahutharn** (in **FSAD2660** Product Development for Active Sportswear): Ethereal accepted for the 2018 *ITAA (International Textile and Apparel Association) Design Competition* (Cleveland, OH)
- 2016 **Rachel Powell** (in **FSAD2660** Product Development for Active Sportswear): Outsider accepted for the 2016 *ITAA (International Textile and Apparel Association) Design Competition*.
- 2015 **Caroline Donelan: Fourth Place** at the Herman and Myrtle Goldstein Student Paper Competition, the *2016 AATCC International Conference*.
- 2014 **Eric Beaudette: First Place** in the **2015 ITAA (International Textile and Apparel Association) Undergraduate Research Paper Competition** (Santa Fe, NM); Eric's research project conducted in **FSAD4030 Empirical Study**.
- 2014 **Eric Beaudette:** Smart Clothing Design with embedded EL wire accepted for *2014 International Symposium of Wearable Computer Design Competition*.
- 2014 **Eric Beaudette and Linnea Fong** (in **FSAD2660** Product Development for Active Sportswear): Pearlscale accepted for *2014 ITAA Design Competition*.
- 2014 **Rachel Powell** (in **FSAD 1140** Intro to CAD): **First Place** in 2014 Summer Magazine Cover Design Competition by *International Textile Marketing Association 2013*.
- 2013 **Rae Dagdagan** (in **FSAD 1140** Intro to CAD): **Honorable Mention** in 2013 Summer Magazine Cover Design Competition by *International Textile Marketing Association 2012*.

- 2012 **Lam Chi Wai** (in **FSAD1140** Intro to CAD), an Exchange student from HongKong Polytech: Won “Lampo Zipper Traveling Scholarship Graphic Design Competition” (5 Days travel to Italy was awarded).
- 2012 **Sandy Flint & Kristen Morris** (in **FSAD6000** Graduate Independent Study): ‘Migration to a New Habitat’ accepted for 2012 *ITAA Design Competition*.
The same design also exhibited in 2012 Cornell Council for Art award project exhibition.
- 2012 **Lesley Young** (in **FSAD3550** Active Sportswear Design): Outfit entitled “Light Out” accepted by the 2013 *ITAA Design Competition*.

ADVISING GRADUATE STUDENTS

My role as a graduate faculty mentor, is to

- 1) consult with each student’s career goal, research interest, strength and study plan,
- 2) provide guidelines for them to identify critical research gap that is aligned with his/her research direction and capabilities,
- 3) offer intensive mentoring for students’ development of scholarly impactful and meaningful research questions and methods,
- 4) provide resource (research tools, equipment and training),
- 5) make connections with the minor members who can support my students’ work,
- 6) walk through data analysis, discussion and conclusion so that they can make meaningful contribution and practical implications to the field,
- 7) provide mentoring for quality writing, and
- 8) support my students’ future career development whether they move to the industry or the academia.

As part of this effort, I have encouraged my students to challenge themselves (beyond taking courses) to maximize their potential and build confidence through student best paper competitions, ITAA fellowship applications, CHE HEAA grant writing, FSAD graduate student speech competition, and submitting patent applications based on their creative ideas, under my supervision.

My effort to best mentor my advisees, has yield positive outcomes as shown in my CV (section: Students’ Successes) which include several ITAA student best paper awards, several patents, internal grants and external fellowship, many peer-reviewed journal publications with me, which is more than completing their degree requirements.

- **Mentoring Graduate Students as Major Advisor:**

- Ph.D. Student Who Graduated

- 2023 Jeyeon Jo (Ph.D.): currently working as an assistant professor at the University of Georgia
Dissertation: Body Monitoring Using Garment-Friendly Wearable Sensors

- Current Ph.D. Students

- Sanjay Guaria (PhD Candidate, currently on leave of absence)
[Assistant professor at Woxsen University in Hyderabad, India]
Dissertation: Redesigning Coveralls for Pesticide Applicators

Jenny Leigh Du Puis (PhD Candidate, currently on leave of absence)
[Assistant professor at College of Chicago]
Dissertation: Design and Development of Circus Performance & Training Attire

Doyeon Kong (3rd semester in a good standing, expected to graduate in May 2026)
Kim Phung Ngyen (1st semester)
Albert Lin (1st semester)

Current M.A. Students

Huieun Do (1st semester)
Anna Gyenge (3rd semester in a good standing, expected to graduate in May 2024)

M.S. & M.A. Students Who Graduated

- 2023 Andrew Melisass, Tulasi Elangovan, Apurva Pandey & Albert Lin (M.A.s)
Andrew's thesis: HODINQHSQ:NIH⁹ HONORED – a Collaborative Lacrosse Uniform Design
Tulasi's thesis: Redesign of Women's Ice Hockey Impact Protection Gear for Improved Comfort, Fit and Protection
Apurva's thesis: Designing a SHIFT from Synthetics – Sustainable Hybrid Insulating Floatation Technical Jacket
Albert's thesis: A Modular Framework for Smart Garment Design
- 2020 Yoojin Chung (M.A. Graduated in 2020), currently working as a researcher at Bionics Research Center, Korea Institute of Science and Technology (KIST)
Thesis: Development of Firefighters' Helmet and Self-Contained Breathing Apparatus (SCBA) Harness for Improving Upper Body Movement
- 2019 Eric Beaudette (M.S. Graduated in 2019), pursuing a Ph.D. in Human Factors and Ergonomics at University of Minnesota
Thesis: RSSI-based Position Sensing Using Artificial Neural Networks and Fabric RFID tag Antennas
- 2017 Manwen Li (M.A. Graduated in 2017), currently working as Lead of 3D Material Virtualization at Under Armour Corp.
Thesis: Study of Effect of Personal Flotation Device on Performance of Rowers
- 2016 Jie Pei (M.A. Graduated in 2016), working as a Senior Consultant at FIT:MATCH Inc.
Thesis: Female Breast Shape Classification based on Analysis of Civilian American and European Surface Anthropometry Resource Data
- 2016 Qinwen Xu (M.A./ Graduated in 2016), currently working as a Planner at Garan Inc. (a children's wear company)
Thesis: Evaluation of Impact of Pointe Shoes Wearing on Ballerinas' Foot Comfort
- 2015 Mary Claire Nemeth (M.A./ Graduated in 2015), currently working as an Instructor at St. Mary's College of Maryland
Thesis: Collegiate Female Athletes' Body Image and Clothing Behaviors
- 2015 Robert Sandy Flint (M.S./ Graduated in 2015), currently working as a Materials Manager at Stio Inc.

Thesis: An Investigation of Thermal Comfort and Asymmetric Transport Property in Electrospun Nanofiber Materials

- **Mentoring Graduate Students as a Minor/Field member:**

Mona Maher (Ph.D.), Nancy Elizabeth Allen (Ph.D.), Kristen Morris (Ph.D.), Catherine Blumenkamp (M.A.), Helen Trejo (Ph.D.), Sarah Portway (Ph.D.), Lun Lou (Ph.D.), Jie Pei (Ph.D.), and Namranta Patil (Ph.D.)

- **Mentoring Visiting Scholars and Post-Docs:**

Eunyoung Lee (Ph.D.) Jie Luo (Ph.D.), Mia Tian (Visiting PhD student from Donghua University, China) and Seonyoung Kim (Ph.D.)

- **Mentoring Undergraduate Researchers:**

2023 **Anna Paaske** (FSAD Senior), **Beckett Fine** (FSAD Senior),
Ashlyn Lee (FSAD Senior), **Mikayla Lin** (FSAD Senior)

2022 **Hanna Norris** (B.S. Graduated in 2022)

2021 **Lauren Forstenhausler** (B.S. Graduated in 2021), currently working as an Assistant Apparel Designer at **Capelli Sport**

2021 **Antonio Martinez** (B.S. Graduated in 2021), pursuing a Ph.D. in Materials Science & Engineering at **University of Pennsylvania**

2018 **Emelia Black** (B.S. Graduated in 2018), currently working as a Product Designer at **True North Gear**

2016 **Erica Hyunji Lee** (B.S. Graduated in 2016), currently working as a Customer Experience Designer at **CLO3D Virtual Fashion Inc.**

2016 **Caroline Donelan** (B.S. Graduated in 2016): Currently working as a technical designer at **Nike**.

I advised her summer internship. Caroline's undergraduate research project was funded by the College of Human Ecology (\$4,000). As an undergraduate student researcher, she completed a series of thermal manikin tests to investigate three different cooling technologies (convective cooling, evaporative cooling and phase change material cooling). The manuscript from this research project has been published at AATCC Research Journal.

2016 **Eric Beaudette** (B.S., Graduated in 2016) with his two teammates in ECE won Cornell ECE (Electrical and Computer Engineering) Innovation Award with \$10K jump-start fund

- Project title: De-stress functional vest development
- My role: Faculty advisor for the team & Co-designer of the vest

DESIGN SCHOLARSHIP (12 JURIED EXHIBITIONS)

Park, H. (2010), The Dream of Dandelion, *The Art of Applied Design International Competition*, Oklahoma State University, Stillwater, OK.

Park, H. (2010), Female Mystique, *Fiber Works 2010 Design Competition*, Oklahoma City, OK.

- Park, H.** (2010), The Waltz of Spring, *Fiber Works 2010 Design Competition*, Oklahoma City, OK.
- Park, H.** (2010), Female Mystique, *Winners' Exhibition for The 24th Annual American Quilter's Society & Hobbs Bonded Fibers Fashion Show and Competition*, Paducah, KY.
- Park, H.** (2009), Magma, *2009 Annual Conference and Fiber Art Design Competition of International Textile and Apparel Association*, Bellevue, WA.
- Park, H.** (2009), Female Mystique, *2009 Annual Conference and Fiber Art Design Competition of International Textile and Apparel Association*, Bellevue, WA.
- Park, H.** (2009), Waterfall, *2009 Annual Conference and Fiber Art Design Competition of International Textile and Apparel Association*, Bellevue, WA.
- Park, H.** (2009), Female Mystique, *The 23rd Annual American Quilter's Society & Hobbs Bonded Fibers Fashion Show and Competition*, Paducah, KY.
- Park, H.** (2009), Female Mystique, *The National Little Black Dress Competition*, Kansas State University, Manhattan, KS.
- Park, H.** (2008), Fossil, *2008 Annual Conference and Fiber Art Design Competition of International Textile and Apparel Association*, Schaumburg, IL.
- Park, H.** (2008), Apocalypse, *2008 Annual Conference and Fiber Art Design Competition of International Textile and Apparel Association*, Schaumburg, IL.
- Park, H.** (2008), Joyful future, *The 22nd Annual American Quilter's Society & Hobbs Bonded Fibers Fashion Show and Competition*, Paducah, KY.

EXAMPLES OF MEDIA ATTENTION

Cornell Chronicles (April 18, 2024). "Faculty awarded for creative, innovative community engagement"
<https://news.cornell.edu/stories/2024/04/faculty-awarded-creative-innovative-community-engagement>

Cornell Chronicles (October 12, 2023). "Researchers have designs on better women's hockey protective gear"
<https://news.cornell.edu/stories/2023/10/researchers-have-designs-better-womens-hockey-protective-gear>

CNY Central – TV Show (February 5, 2024). "Cornell researchers strive to create better protection for women's ice hockey players"
<https://cnycentral.com/sports/college/cornell-researchers-strive-to-create-better-protection-for-womens-ice-hockey-players>

Cornell Daily Sun (October 18, 2023). "Cornell Researchers Create New Smart Shirt, Utilize Innovative Fiber Optic Embroidery"
<https://cornellsun.com/2023/10/18/cornell-researchers-create-new-smart-shirt-utilize-innovative-fiber-optic-embroidery/>

College of Human Ecology (Jun. 30, 2023) "Park brings zero-waste fashion expertise to Korea"
<https://www.human.cornell.edu/news/imported/2023/06/park-brings-zero-waste-fashion-expertise-korea>

Cornell Chronicle (Jan. 6, 2023) "The ethics of leadership and design"
<https://news.cornell.edu/stories/2023/06/ethics-leadership-and-design>

Cornell Chronicle (Sep. 13, 2022) "From methane to microbes: 2030 Project conveys first grants"
<https://news.cornell.edu/stories/2022/09/methane-microbes-2030-project-conveys-first-grants>

College of Human Ecology (Apr. 13, 2022) "Park Wins Class of 1972 Innovative Teaching Award"
<https://www.human.cornell.edu/news/imported/2022/04/park-wins-class-1972-innovative-teaching-award>

Cornell Chronicle (Mar. 16, 2022) “Collaboration is a good fit for wearable sensor startup”
<https://news.cornell.edu/stories/2022/03/collaboration-good-fit-wearable-sensor-startup>

Cornell Chronicle (Mar. 12, 2022) “Staff, faculty win SUNY Chancellor’s Awards for Excellence”
<https://news.cornell.edu/stories/2022/05/staff-faculty-win-suny-chancellors-awards-excellence>

Newswise (Jan. 20, 2022) “Focus on fit and function: Don’t dump the cloth masks just yet”
https://www.newswise.com/coronavirus/focus-on-fit-and-function-don-t-dump-the-cloth-masks-just-yet/?article_id=764132&ta=home

Technical Textile Net (Apr. 11, 2020) “Cornell University Team Improving PPE”
<https://www.technicaltextile.net/news/cornell-university-team-improving-ppe-266410.html>
Discovery Channel Canada, Daily Planet (aired on Apr. 18, 2013), “Future Tech: Fire Gear”

NPR (National Public Radio) News (aired through WSKG Innovation Trail on Jan. 18, 2013),
“Researcher looks to make firefighters' work a bit easier” (Jan., 2013)

The Cornell Daily Sun (Nov. 12, 2013), "Three Cornell Teams Given \$15,000 to Support Sustainability Research" <http://cornellsun.com/blog/2013/11/12/three-cornell-teams/>

The Cornell Daily Sun (Feb. 12, 2013), "Improving Firefighter Gear Using 3-D Technology"
<https://cornellsun.com/2013/02/12/improving-firefighter-gear-using-3-d-technology/>

MIT Technology Review (Dec. 2012), “How Technology Can Reduce Firefighter Injuries”

Fire Apparatus magazine (Dec. 5, 2012), “Building Firefighter PPE Using 3D Imaging”,

Lab Manager (Mar. 28, 2015) “USAID Taps Cornell to Advance Ebola Protective Garments”

Firehouse.com (Dec. 6, 2012), “Project Aims to Design Better-Fitting Turnout Gear”
<http://www.firehouse.com/news/10838482/project-aims-to-design-better-fitting-turnout-gear>

Fire Chief Publications (Dec. 18, 2012), “Cornell studies protective gear to reduce injuries, fit women”,

Stargazette.com (Jan. 16, 2013), “Cornell professor using 3-D technology to aid firefighters”

Symposium spotlights cutting-edge fiber science
<http://www.news.cornell.edu/stories/2015/05/symposium-spotlights-cutting-edge-fiber-science>

Beaudette '16 Honored For 3-D Printed Clothing <http://cornellsun.com/2016/01/28/beaudette-16-honored-for-3d-printed-clothing/>

SERVICE AT CORNELL

2022 - 2023	Chair of Search Committee for Director/Lecturer of Digital Design Fabrication Studios Department of Human Centered Design College of Human Ecology, Cornell University
2022 Spring	Chair of 2022 Nixon Speaker Series Invited Stuart Weitzman
2022 – present	Campus Planning Committee Cornell University
2021 - present	Cornell Design + Technology Taskforce Cornell University
2021 - 2022	Policy and Procedure Committee Department of Human Centered Design, College of Human Ecology, Cornell University
2020 - 2021	FSAD Website Updates College of Human Ecology, Cornell University
2020 - 2021	DEA – FSAD Integration Committee College of Human Ecology, Cornell University
2020 - present	FSAD Mentoring Committee for Junior Faculty, Fatma Baytar Department of Human Centered Design, Cornell University
Spring 2018 - present	University Appeals Panel Cornell University
Fall 2017 – Fall2020	Diversity Committee Member College of Human Ecology, Cornell University
Summer 2017- Spring 2018	Director of Undergraduate Studies Dept. of Fiber Science & Apparel Design, Cornell University
Fall 2016- Spring 2018	FSAD Faculty Search Chair Dept. of Fiber Science & Apparel Design, Cornell University
Fall 2016 - Spring 2017	Faculty Advisor of Cornell Fashion Collective Dept. of Fiber Science & Apparel Design, Cornell University
Fall 2016 -present	Faculty Advisor of Geoffrey Beene Competition Dept. of Fiber Science & Apparel Design, Cornell University
2014-2018	Faculty Advisor of Cornell Student Chapter of AATCC (American Association of Textile Chemists and Colorists) Cornell University

2014-2016	Member of Committee on Academic Status College of Human Ecology, Cornell University
2012-2019	Human Ecology CAD committee member College of Human Ecology, Cornell University
2014-2015	A Member of Search Committee for Apparel Design Faculty Positions Dept. of Fiber Science & Apparel Design, Cornell University
2014-present	Co-Faculty Advisor of YMA Fashion Scholarship Fund Dept. of Fiber Science & Apparel Design, Cornell University
2012-present	Co-Organizer of Cornell Design Award Dept. of Fiber Science & Apparel Design, Cornell University
2012-present	Faculty Lead of ITAA Design Competition Dept. of Fiber Science & Apparel Design, Cornell University
2012-2017	Faculty Lead of ITMA (International Textile Marketing Association) Textile Design Competition Dept. of Fiber Science & Apparel Design, Cornell University
2009-2010	Graduate Student Liaison & Representative International Textile and Apparel Association (ITAA)
2010	Vice President Graduate Student Organization in Human Environmental Science (GSHES), Oklahoma State University, Stillwater, OK.
2009-2010	DHM Graduate Student Representative to GPSGA (Graduate and Professional Student Government Association) Department of Design, Housing and Merchandising, Human Environmental Science, Oklahoma State University, Stillwater, OK.
2009	Activity Chair Officer Graduate Student Human Environmental Science (GSHES), Oklahoma State University, Stillwater, OK.

LEADERSHIP & SERVICE TO DESIGN & SCIENCE COMMUNITIES

- **Associate Editor** of *Clothing and Textile Research Journal (Apparel Science Track)* (2019-2023)
- **Invited Guest Editor** for focus issue of *Clothing and Textile Research Journal* (2023-2024)
- **Chair of Apparel and Textile Science Track of ITAA** (2018 – 2022)
- **Editorial Board Member** of *Fashion and Textiles* (2018 – present)
- **Editorial Board Member** of *International Journal of Textile Science and Engineering* (2014-2016)
- **Editorial Board Member** of *The Korean Society of Living Environmental System* (2014-2016)
- Reviewer of following peer review journals:
Ergonomics,
Applied Ergonomics,
Textile Research Journal,
Clothing and Textile Research Journal,
Research Journal of Textile and Apparel,

Fire Science,
International Journal of Clothing Science and Technology,
AATCC Review (American Association of Textile Chemists and Colorists Peer Review Journal)

- Invited textbook reviewers for *Functional Apparel Design, & Fashion and Technology* (Publisher: Fairchild Books Inc.)

PROFESSIONAL DEVELOPMENT

2014 & 2019	CLO3D Apparel CAD Training
2013	Rhinoceros 3D Design and Modeling Software Training by Magnetic Vision Inc., Brooklyn, NY.
2013	Optitex Apparel Pattern CAD Training
2010	Siemens Product Line Management Program Training Oklahoma State University, Stillwater, OK.

OUTREACH

2023 & 2024	<p>“4H Career Exploration: Smart Firegear Smart Teen” June 29 – July 2, 2023 & June 26-29, 2024 Funded by USDA, National Institute for Food and Agriculture Project leader: Heeju Park</p>
2018	<p>“Greenhouse Pesticide Applicators and Personal Protective Equipment: Assessment of Greenhouse Applicator Needs” Sanjay Guria and Huiju Park 2018 Cornell Pesticide Applicator Update (March 13, 2018) 146 Morrison Hall, Cornell University Audience: About 60 Greenhouse pesticide applicators Funded by USDA, National Institute for Food and Agriculture</p>
2013	<p>“4H Career Explorations: The Activewear Advantage” (Summer 2013) Funded by New York State 4-H Foundation Charlotte Coffman & Huiju Park</p> <p>My responsibility: Develop proposals and activity plan with Charlotte Coffman, deliver presentations about the latest sportswear technologies, demonstrate a sweating thermal manikin and 3D motion capture technologies, support a hands-on experience for 4H youth groups and develop educational footage about sportswear technology and design approaches.</p> <p>Outcomes 1) Four videos were produced (links below), which were posted at the end of January, 2014 on the FSAD Youth Webpages. Mobility in activewear and protective clothing: http://youtu.be/fOunMHeKgZQ Thermal regulation: http://youtu.be/rDT89pFNUUo Fit and Construction: http://www.youtube.com/watch?v=Eh-j3vNRm0U Impact protection: http://www.youtube.com/watch?v=gLYXdM4xxfs</p>

2) 3-day campus experience for teens, focusing on their career explorations on the Cornell Campus

3) 2-day campus experience for Citizen University on the Cornell Campus

4) Two poster presentations shown below: “Engaging Youth in STEM Learning; Exploring the Innovations of Sportswear Development”, Eric Beaudette, Charlotte Coffman, & **Huiju Park**, CHE/CCE Intern Presentations, Cornell University (September 24, 2013).

“Active Youth; Activewear; Active Learning”, Charlotte Coffman, **Huiju Park**, & Eric Beaudette, New York State Association of Cornell Cooperative Extension 4-H Educators Conference, Lake Placid, NY. (October 15-17, 2013).

2008

“Building a Sustainable Oklahoma” Workshop (March 29, 2008)

Funded by Environmental Protection Agency, Norman, OK.

My Responsibility: Completed literature review, edited presentation material, and developed evaluation questionnaire

PROFESSIONAL MEMBERSHIP

- Faculty Fellow of Cornell Atkinson Center for a Sustainable Future
- Member of International Textile and Apparel Association (ITAA)
- Member of ITAA Design Award Committee
- Member of NC170 Multi-State Research Group